

REMARKS

Status of Application

Claims 1, 2 and 4-10 were pending in this application. In the Office Action mailed April 10, 2009, claims 1, 2 and 4-10 were rejected.

By this amendment, claims 5 and 11-13 are pending as new or previously presented. Claims 2, 4 and 6-9 are currently amended. Claims 1, 3 and 10 are cancelled. No new matter is introduced by these amendments, which are fully supported by the specification.

Applicant requests reconsideration and allowance of claims 2 and 4-13.

Applicant reserves the right to prosecute any withdrawn, cancelled, or non-elected claims and/or subject matter in separate applications.

35 U.S.C. § 112 Rejections

The Examiner rejected claims 1-9 as being indefinite for lacking certain antecedent basis.

Claims 2 and 4-13 have been clarified by amendment. Thus, this rejection can be withdrawn.

35 U.S.C. § 102 Rejections

In the Office Action mailed April 10, 2009, a heading was given in paragraph 9 for rejections under 35 U.S.C. § 102. However, the rejections made are clearly regarding obviousness. Applicants believe there are no rejections under 35 U.S.C. § 102 at the present time.

35 U.S.C. § 103 Rejections

Claims 1-9 were rejected as unpatentable over Reader et al. (Adaptive Correction of Scatter and Random Events for 3-D Backprojected PET Data) in view of Watson et al. (New,

Faster, Image-Based Scatter Correction for 3D PET). However, the Examiner provided no details in paragraph 8 of the Office Action mailed April 10, 2009. Thus, Applicants believe that the rejections are as stated below.

Claims 1-10 were rejected as unpatentable over Reader et al. (Adaptive Correction of Scatter and Random Events for 3-D Backprojected PET Data) in view of Ohishi et al. (US2003-0031299). In brief, the Examiner stated that Reader et al. teaches an apparatus for images which includes segmenting, determining a baseline function, and calculating a corrected image. The Examiner stated that Reader et al. fails to teach “density within said at least one segmented area lies within a given density interval.” The Examiner further stated that Ohishi et al. uses a “correction table defining a correcting value to a change in densities of a region.”

Claims 2 and 9 were rejected as unpatentable over Reader et al. in view of Ohishi et al., and further in view of Watson et al. (New, Faster, Image-Based Scatter Correction for 3D PET). In brief, the Examiner stated that Watson et al. teach a “scatter estimate computed from an uncorrected image using a single-scatter operator.”

Applicants’ respectfully submit that Reader et al., Ohishi et al., and Watson et al., either alone or in any combination, do not disclose or suggest all the limitations of Applicants’ claims nor provide a *prima facie* case of obviousness.

Ohishi et al. describes an imaging processing apparatus for which “[t]he correcting unit corrects the projection data.” See Ohishi et al., Abstract, Fig. 6, Fig. 9, Fig. 12, and paragraphs 56, 54-55. In contrast, Applicants’ claimed apparatus is advantageous precisely because it “does not try to correct the artifacts on the level of individual projections but processes the whole reconstructed sectional image.” (See specification at page 2, lines 29-31) Thus, Applicants’ apparatus is substantially different from Ohishi et al.

More specifically, Applicants respectfully submit that Reader et al., Ohishi et al., and Watson et al. do not disclose or suggest “providing in memory a sectional image,” “segmenting the sectional image” into “segmented areas correspond narrowly to the densities of bone, tissue, and air,” “eroding the segmented areas at their boundaries,” “determining a baseline function that describes spatially slowly varying artifacts of the sectional image based on the data of the segmented area corresponding to tissue,” “resegmenting the baseline-fit region of the segmented area corresponding to tissue,” “eroding the boundaries of the

resegmented area,” and “storing to the memory a corrected sectional image,” as claimed by Applicants.

In conclusion, claims 2 and 4-13 are patentable over the cited references, either alone or in any combination.

CONCLUSION

Applicants respectfully submit that claims 2 and 4-13 as amended distinguish patentably from the references of record and are in condition for allowance. Applicants request reconsideration and allowance of claims 2 and 4-13.

Should any questions remain, Examiner is invited to telephone Applicant's representative at the number provided.

Respectfully submitted,

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